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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/562,337	05/16/00	TAMATANI T	SHIM-006

HM12/0619

BOZICEVIC FIELD & FRANCIS
SUITE 200
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EXAMINER
HUYNH, P

ART UNIT	PAPER NUMBER
1644	10

DATE MAILED: 06/19/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/582,337	Applicant(s) TAMATANI ET AL.	
	Examiner " Neon" Phuong Huynh	Art Unit 1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *One* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 September 2000* .

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *104-154* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claims *104-154* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15)☒ Notice of References Cited (PTO-892)
16)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18)☐ Interview Summary (PTO-413) Paper No(s). _____ .
19)☐ Notice of Informal Patent Application (PTO-152)
20)☐ Other:

DETAILED ACTION

1. The location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 1644, Group 1640, Technology Center 1600.

2. **Please Note**: In an effort to enhance communication with our customers and reduce processing time, Group 1640 is running a Fax Response Pilot for Written Restriction Requirements. A dedicated Fax machine is in place to receive your responses. The Fax number is 703-308-4315. A Fax cover sheet is attached to this Office Action for your convenience. We encourage your participation in this Pilot program. If you have any questions or suggestions please contact Paula Hutzell, Ph.D., Supervisory Patent Examiner at Paula.Hutzell@uspto.gov or 703-308-4310. Thank you in advance for allowing us to enhance our customer service. Please limit the use of this dedicated Fax number to responses to Written Restrictions.

3. Preliminary amendments, filed 9/18/00, are acknowledged.
Claims 1-103 have been canceled.
Claims 104-154 have been added.
Claims 104-154 are pending.

4. The following is noted:

Monoclonal antibodies comprise different properties, different amino acid composition (structure) and produced by different hybridoma. These antibodies are unique products that differ with respect to their properties, structures and mode of action and a person of ordinary skill in the art would not envision one in view of the other. Since it is not clear from the specification as filed which hybridoma comprises which property and structure, the burden is on Applicants to identify which hybridoma (identified by deposit number) has which property as recited in claims 104 and 109, and which structure (SEQ ID NO) as recited in claims 113-117. Therefore, the restriction has been set forth for each as separate groups, irrespective of the format of the claims.

Election/Restrictions

5. Restriction to one of the following inventions is required under 35 U.S.C. 121 and 372:
This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in response to this Action, to elect a single invention to which the claims must be restricted:

I. Claims 104, 121, 123, 125-126, 128-135 and 142, drawn to a monoclonal antibody or a portion thereof having the properties of reactive to human, mouse and rat connective tissue growth factor, a cell producing said monoclonal antibody and a kit comprising said antibody-immobilized to insoluble carrier.

II. Claims 104, 121, 123, 125-126, 128-135 and 142, drawn to a monoclonal antibody or a portion thereof having the properties of reactive to both human and mouse connective tissue growth factor, a cell producing said monoclonal antibody and a kit comprising said antibody-immobilized to insoluble carrier.

III. Claims 104, 121, 123, 125-126, 128-135 and 142, drawn to a monoclonal antibody or a portion thereof having the properties of reactive to both mouse and rat connective tissue growth factor, a cell producing said monoclonal antibody and a kit comprising said antibody-immobilized to insoluble carrier.

IV. Claims 104, 121, 123, 125-126, 128-135 and 142, drawn to a monoclonal antibody or a portion thereof having the properties of reactive to rat connective tissue growth factor, a cell producing said monoclonal antibody and a kit comprising said antibody-immobilized to insoluble carrier.

V. Claims 104, 121, 123, 125-126, 128-135 nd 142, drawn to a monoclonal antibody or a portion thereof having the properties of inhibiting the binding of human CTGF to human kidney-derived fibroblast cell line 293-T (ATCC CRL 1573) or the binding of mouse CTGF to said cell line 293-Y, a cell producing said monoclonal antibody and a kit comprising said antibody-immobilized to insoluble carrier.

VI. Claims 104, 121, 123, 125-126, 128-135 and 142, drawn to a monoclonal antibody or a portion thereof having the properties of inhibiting the binding of human CTGF to any cells of rat kidney-derived fibroblast cell line NRK-49F (ATCC CRL-1570), human osteosarcoma-derived cell line MG-63 (ATCC CRL-1427) or human lung-derived

fibroblasts, a cell producing said monoclonal antibody and a kit comprising said antibody-immobilized to insoluble carrier.

VII. Claims 104, 121, 123, 125-126, 128-135 and 142, drawn to a monoclonal antibody or a portion thereof having the properties of inhibiting cell proliferation of rat kidney-derived fibroblast cell line NRK-49F (ATCC CRL-1570) induced by stimulus with human or mouse CTGF, a cell producing said monoclonal antibody and a kit comprising said antibody-immobilized to insoluble carrier.

VIII. Claims 104, 121, 123, 125-126, 128-135 and 142, drawn to a monoclonal antibody or a portion thereof having the properties of inhibiting an increase of an elevated level of hydroxyproline in the kidney, a cell producing said monoclonal antibody and a kit comprising said antibody-immobilized to insoluble carrier.

IX. Claims 104-106, 121, 123, 125-135 and 142, drawn to a monoclonal antibody or a portion thereof, a cell producing said antibody, a hydridoma identified by an international deposit accession No. FERM BP-6208, and a kit comprising said antibody-immobilized to insoluble carrier.

X. Claims 104, 107-108, 121, 123, 125-135 and 142, drawn to a monoclonal antibody or a portion thereof, a cell producing said antibody, a hydridoma identified by an international deposit accession No. FERM BP-6209, and a kit comprising said antibody-immobilized to insoluble carrier.

XI. Claims 109-117, 122, 123-126 and 148-154, drawn to a human monoclonal antibody or a portion thereof, reactive human CTGF and having a property of inhibiting binding of human CTGF to human kidney-derived fibroblast cell line 293-T (ATCC CRL 1573), a cell producing said antibody, a pharmaceutical composition and a pharmaceutical acceptable carrier.

XII. Claims 109-117, 122 and 123-126 and 148-154, drawn to a human monoclonal antibody or a portion thereof, reactive human CTGF and having a property of inhibiting binding of human CTGF to any of rat kidney-derived fibroblast cell line NRK-49F (ATCC CRL-1570) human osteosarcoma-derived cell line MG-63 (ATCC CRL-1427), or human lung-derived fibroblasts and a cell producing said antibody, a pharmaceutical composition and a pharmaceutical acceptable carrier.

XIII. Claims 109-117, 122 and 123-126 and 148-154, drawn to a human monoclonal antibody or a portion thereof, reactive human CTGF and having a property of inhibiting cell proliferation of rat kidney-derived fibroblast cell line NRK49F (ATCC CRL-1570) induced by a stimulus with human or mouse CTGF and a cell producing said antibody.

XIV. Claims 109-117, 122, 123-126 and 148-154, drawn to a human monoclonal antibody or a portion thereof, reactive human CTGF and having a property of inhibiting an increase of an elevated level of hydroxyproline in kidney and a cell producing said antibody, a pharmaceutical composition and a pharmaceutical acceptable carrier.

XV. Claims 109, 118-120, 122, 124, 126-127 and 148-154, drawn to a human monoclonal antibody or a portion thereof produced by a hydridoma identified by an international deposit accession No. FERM BP-6535, a cell or hybridoma producing said human monoclonal antibody, a pharmaceutical composition comprising said antibody and a pharmaceutical acceptable carrier.

XVI. Claims 109, 118-120, 122, 124, 126-127 and 148-154, drawn to a human monoclonal antibody or a portion thereof produced by a hydridoma identified by an international deposit accession No. FERM BP-6598, a cell or hybridoma producing the human monoclonal antibody, a pharmaceutical composition comprising said antibody and a pharmaceutical acceptable carrier.

XVII. Claims 109, 118-120, 122, 124, 126-127 and 148-154, drawn to a human monoclonal antibody or a portion thereof produced by a hydridoma identified by an international deposit accession No. FERM BP-6599, a cell or hybridoma producing the human monoclonal antibody, a pharmaceutical composition comprising said antibody and a pharmaceutical acceptable carrier.

XVIII. Claims 109, 118-120, 122, 124, 126-127 and 148-154, drawn to a human monoclonal antibody or a portion thereof produced by a hydridoma identified by an international deposit accession No. FERM BP-6600, a cell or hybridoma producing the human monoclonal antibody, a pharmaceutical composition comprising said antibody and a pharmaceutical acceptable carrier.

XIX. Claims 136-141, drawn to a method for detecting mammalian CTGF by immunoassay using monoclonal antibody produced by a hydridoma identified by an international deposit accession No. FERM BP-6208 or FERM BP-6209.

XX. Claims 143-144, drawn to a method for separating or purifying mammalian CTGF using affinity chromatography.

XXI. Claims145, drawn to a transgenic mouse in which DNA encoding human CTGF.

XXII. Claim 146, drawn to a rat CTGF comprising amino acid sequence of SEQ ID NO: 2.

XXIII. Claim 147, drawn to a DNA encoding a rat CTGF comprising polynucleotide of SEQ ID NO: 1.

The inventions listed as Groups I-XXIII above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Grotendorst et al (US Patent No. 5,408,040; PTO 1449) teach a human connective tissue growth factor (CTGF) and DNA encoding said CTGF that stimulates cell proliferation.

Mucke *et al.* (US Patent No. 6,175,057; PTO 892) teach a transgenic mouse model wherein the transgenic mouse is either overexpressed biological active transforming growth factor-β1 or both overexpressed transforming growth factor-β1 and a human amyloid β precursor protein for AD and/or CAA pathologies. The advantages of using a transgenic mouse model is that the mouse exhibits phenomena associated with Alzheimer's disease (AD) and/or cerebral amyloid angiopathy (CAA) pathologies and such transgenic models are useful for screening candidate agents for use in treating or relieving symptoms of Alzheimer's disease and cerebral amyloid angiopathy. (See entire document, column 5, line 5-26, in particular).

It would have been obvious to one ordinary skill in the art at the time the invention was made to substitute the transforming growth factor-β1 taught by Mucke et al with the human connective tissue growth factor (CTGF) taught by Grotendorst et al to make transgenic mice overexpressed human CTGF as taught by Grotendorst et al because a transgenic mouse model is useful for screening candidate compounds for use in treating or relieving the symptoms associated with CTGF.

Therefore, the technical feature of combining the inventions of Groups XXI (claim 145) does not constitute a special technical feature as defined by PCT Rule 13.2.

Since Applicant's Inventions do not contribute a special technical feature when viewed over the prior art, they do not have a single general inventive concept and lack unity of invention.

6. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Huynh "NEON" whose telephone number is (703) 308-4844. The examiner can normally be reached Monday through Friday from 8:00 am to 5:00 p.m. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (703) 308-3973. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1600 receptionist whose telephone number is (703) 308-0196.

9. Papers related to this application may be submitted to Technology Center 1600 by facsimile transmission. Papers should be faxed to Technology Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center telephone number is (703) 305-3014.

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June 14, 2001

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